

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>OP-C4230</b>	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/015727</b>	International filing date (day/month/year) <b>22.10.2004</b>	Priority date (day/month/year) <b>25.11.2003</b>	
International Patent Classification (IPC) or national classification and IPC <b>F02M61/16 (2006.01) , F02M61/14 (2006.01) , F02F1/24 (2006.01) , F02F11/00 (2006.01)</b>			
Applicant <b>TOYOTA JIDOSHA KABUSHIKI KAISHA</b>			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <b>5</b> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <b>7</b> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/015727

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

international search (Rule 12.3 and 23.1(b))  
 publication of the international application (Rule 12.4)  
 international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished  
 the description:

pages 1-4 as originally filed/furnished

pages\* 5-10 received by this Authority on 31.05.2005

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

nos. \_\_\_\_\_ as originally filed/furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* 2, 3, 5 received by this Authority on 31.05.2005

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

sheets Fig. 2-4 as originally filed/furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages 11  
 the claims, nos. 1, 4  
 the drawings, sheets/figs 1  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/015727Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Fig.	Novelty (N)	Claims	<u>2, 3, 5</u>	YES
		Claims	_____	NO
	Inventive step (IS)	Claims	_____	YES
		Claims	<u>2, 3, 5</u>	NO
	Industrial applicability (IA)	Claims	<u>2, 3, 5</u>	YES
		Claims	_____	NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP 4-86371 A (Yamaha Motor Co., Ltd.), 18 March 1992, entire text; all drawings

Document 2: JP 11-294302 A (Yamaha Motor Co., Ltd.), 26 October 1999, paragraph [0030]; fig. 5 and 8 & EP 0945611 A2, paragraph [0060], fig. 5, 8, 15, 22, 26 and 30

Document 3: JP 2002-202030 A (NOK Corporation), 19 July 2002, paragraphs [0026] and [0027]; fig. 1 & US 2003/0178784 A1, paragraphs [0045] and [0046]; fig. 1 & EP 1326022 A1 & WO 2002/031354 A1 & AU 9424701 A

Document 4: JP 2002-364494 A (Toyota Motor Corporation, NOK Corporation, Denso Corporation), 18 December 2002, paragraph [0028]; fig. 1

Document 5: JP 2002-81548 A (Honda Motor Co., Ltd.), 22 March 2002, paragraph [0013]; fig. 1

Document 6: JP 2002-257239 A (Toyota Motor Corporation, NOK Corporation, NOK Vibracoustic Corporation), 11 September 2002, entire text; all drawings

The invention set forth in claim 2 does not involve an inventive step in the light of documents 1 and 2 cited

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in the international search report and newly cited documents 3 to 5. It would be easy for a person skilled in the art to apply the known feature set forth in documents 3 to 5, wherein the seal rings of combustion gas seals for fuel injection valves comprise heat-resistant members made from resin, to a combustion gas seal for fuel injection valves having all of a plurality of annular grooves provided on the outer peripheral surface of a fuel injection valve provided with seal rings having approximately the same outer diameter dimensions, as set forth in documents 1 and 2.

The invention set forth in claims 3 and 5 does not involve an inventive step in the light of documents 1 to 5 and document 6 cited in the international search report. It would not be particularly difficult for a person skilled in the art to add the feature set forth in document 6, wherein a seal washer having a metal ring and a rubber flexible member fixed to said metal ring by baking is held in place by the housing and fuel injection valve, to the combustion gas seal for fuel injection valves set forth in documents 1 to 5.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/015727

Box No. VI	Certain documents cited			
1. Certain published documents (Rule 70.10)	Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
	JP 2004-239124 A	26.08.2004	05.02.2003	
	[E, X]			
2. Non-written disclosures (Rule 70.9)	Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)	